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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,267	06/27/2001	Shuji Shimizu	SON-2147	1629

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WASHINGTON, DC 20036

EXAMINER

VIEAUX, GARY

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/891,267	SHIMIZU, SHUJI	
	Examiner	Art Unit	
	Gary C. Vieaux	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

The Amendment, filed December 28, 2006, has been received and made of record. In response to the most recent Office Action, dated August 23, 2006, claims 1,

5 2, 8, and 9 have been amended.

Response to Amendment

Regarding objected to claims 1, 2, 8, and 9, the claims have been amended to correct the previously identified informalities, and therefore, the objections to claims 1,

10 2, 8, and 9 are withdrawn.

Regarding amended claim 1, the amended claim language has been determined to be congruent with the language found within the specification, and is now within a level of specificity such that one of ordinary skill in the art would be reasonably appraised of the scope of the invention as claimed. Therefore, the 35 U.S.C. 112,

15 second paragraph, rejections to claims 1-13 are hereby withdrawn.

Response to Arguments

Applicant's arguments filed December 28, 2006, have been fully considered but they are not persuasive.

20 Applicant submits that the four-way combination of references is improper, due to the absence of a proper motivation to make the combination (Remarks, p.8.) The Examiner respectfully disagrees.

Review of the 35 U.S.C. 103(a) rejection of claim 1 (see Office Action dated August 23, 2006) finds that motivation was provided for the addition of each reference, and that the references are reasonably pertinent to the problem with which Applicant was involved, namely, an electronic camera in which exposure control is determined by the photo-taking situation, and that the references would have commended themselves to anyone addressing such a problem. Therefore, because motivation for combination of each reference has been provided, and each are applicable to the circumstances concerned, the Examiner respectfully stands behind the 35 U.S.C. 103(a) rejection of claim 1.

Further, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (Remarks, p. 8), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding claims 2-13, each depends either directly from or indirectly from independent claim 1, and thus inherits all the limitations of independent claim 1.

Consequently, based on their dependence and the foregoing response to arguments relating to claim 1, the Examiner respectfully stands behind the 35 U.S.C. § 103(a) rejections to claims 2-13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

5 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10 **Claim 1-3, 5-10, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley et al. (US 5,550,754) in view of Takahashi et al. (US 5,621,462) and Fullam (US 5,764,291), in further view of Wakabayashi et al. (JP 08-223492.)

Regarding claim 1, McNelley teaches a camera being mounted on an electronic
15 apparatus having a display screen (fig. 12 indicator 100) and the camera being capable of setting a photographing direction relative to at least the front or rear of the display screen (fig. 12, col. 8 line 64 – col. 9 line 22), camera support means located on the ends of the electronic camera (col. 8 line 64 – col. 9 line 12.) McNelley also teaches photographing direction detecting means (col. 9 lines 20-22) adjacent to the camera
20 support means located on the end of the camera (fig. 12 indicator 224) for outputting a corresponding direction detection signal when the photographing direction of the electronic camera is set to the rearward direction (col. 9 lines 14-22.) McNelley does not teach controlling an exposure of the electronic camera.

Takahashi teaches a device for controlling an exposure of an electronic camera,
25 said device comprising:

exposure detecting means (fig. 3 indicators 9, 10, and 25, col. 5 lines 12-21) for generating exposure detection information indicative of the average magnitude of said video signals of a photographed image based on video signals generated by the electronic camera (col. 4 lines 36-39), (col. 4 lines 36-42);

5 exposure adjusting means (fig. 3 indicators 2, 12, 13, 14, and 25) for adjusting the exposure of the electronic camera based on said exposure detection information generated by said exposure detecting means (col. 5 line 65 – col. 6 line 60); and

photographing mode means (fig. 3 indicator 20) for outputting a corresponding mode (col. 5 lines 12-21, col. 9 lines 37-44), wherein

10 the exposure detecting means logically divides one photographed image (col. 4 lines 45-49) according to first and second patterns (fig. 8 and 7, respectively) and in the division by said first pattern (fig. 8), divides said photographed image into an upper area and a lower area to generate first exposure detection information relatively strongly reflecting the magnitude of said video signal corresponding to said lower area (col. 8
15 lines 8-26); and in the division by said second pattern (fig. 4 and 7), divides the photographed image into a central area and a peripheral area to generate second exposure detection information relatively strongly reflecting the magnitude of the video signal corresponding to said central area (col. 5 lines 22-33, col. 7 line 65 – col. 8 line 7) and, when said photographing mode means outputs said mode corresponding to the
20 first pattern, said exposure adjusting means adjusts the exposure of the electronic camera on the basis of said first exposure detection information (col. 9 lines 37-65), and when the photographing mode means outputs a mode corresponding to the second

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pattern, the exposure adjusting means adjusts the exposure of the electronic camera on the basis of said second exposure detection information (col. 9 lines 37-65.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the device for controlling an exposure of an electronic camera as taught by Takahashi, with the camera being mounted on an electronic apparatus having a display being capable of setting a photographing direction to at least the front or rear of a screen of said display as taught by McNelley. One of ordinary skill in the art at the time the invention was made would be motivated to arrange this combination in order to provide an image pickup device capable of exposure control which can follow the photo-taking situation in a natural manner ('462 col. 2 lines 27-31), regardless of orientation (photographing direction) to the front or rear of the screen of the electronic apparatus.

It is also noted that Takahashi does teach photographing modes, wherein, the modes determine how the exposure adjusting means adjust the exposure of the electronic camera on the basis of the resulting exposure detection information (col. 9 lines 37-65.) These modes relate to "center-weighted" (second pattern) for when there is a high probability of the main object being positioned in the central area of the image frame (col. 5 lines 22-33) and "landscape" (first pattern) for when the sky and ground are generally included in the frame at the same time (col. 8 lines 8-26.)

Neither McNelley nor Takahashi teach controlling an exposure of an electronic camera by a device that incorporates the photographing direction detecting means for, when the photographing direction of the electronic camera is set to face the rear of the

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screen, outputting a corresponding direction detection signal, which, when said photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera on the basis of a first exposure detection information, and when the photographing direction detecting
5 means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera on the basis of a second exposure detection information.

Fullam teaches a device for controlling an exposure of an electronic camera, the camera being capable of setting a photographing direction (col. 2 lines 21-23), said
10 device comprising:

photographing direction detecting means (fig. 2B) for, when the photographing direction of the electronic camera is inverted from its normal operating orientation (col. 2 lines 53-63), outputting a corresponding direction detection signal (fig. 6, signal 11; col. 7 lines 9-34), as well as teaching when said photographing direction detecting means
15 outputs said direction detection signal (fig. 6, signal 11; col. 7 lines 17-19), exposure adjusting means (col. 3 lines 62-67, col. 4 lines 47-62) adjusts the exposure of the electronic camera on the basis of the corresponding exposure detection information (col. 4 lines 47-62), and when the photographing direction detecting means does not output a direction detection signal (fig. 6, signal 00; col. 7 lines 17-19), the exposure
20 adjusting means (col. 3 lines 62-67, col. 4 lines 47-62) adjusts the exposure of the electronic camera on the basis of corresponding exposure detection information (fig. 6;

col. 7 lines 17-19.) The examiner points out the fact that a signal output consisting of zero volts is equivalent to no signal being outputted.

Fullam also teaches dividing a photographic image according a pattern wherein the photographed image is divided into an upper area and a lower area to generate exposure detection information (col. 7 line 35 – col. 8 line 40) relatively strongly reflecting the magnitude of a signal corresponding to said lower area (col. 1 lines 36-62.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the photographing direction detecting means which outputs direction detection signals to adjust the exposure in relation to camera orientation (photographing direction) as taught by Fullam, with the device for controlling an exposure of an electronic camera as taught by McNelley and Takahashi. One of ordinary skill in the art at the time the invention was made would be motivated to make this combination as a way to automatically adjust the exposure of a camera according to camera orientation (photographing direction.)

Additionally, McNelley teaches using the camera for different photographing situations, videoconferencing and general camera recording use ('754 col. 2 lines 48-53), which requires different camera orientations (photographing directions) ('754 col. 9 lines 2-8) and Takahashi teaches using photographing modes to control an exposure of an electronic camera based on different photographing situations, center-weight and landscape (col. 9 lines 37-65.) Therefore, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to employ direction detection

signals which adjust the exposure based on photographing direction as taught by Fullam, to also select different patterns corresponding to those photographing directions for controlling an exposure of an electronic camera as taught by McNelley and Takahashi. One of ordinary skill in the art at the time the invention was made would have been motivated to use different patterns based on orientation (photographing direction) in order to control the exposure of an electronic camera as the orientation (photographing direction) relates to potential camera applications; the first pattern (landscape – facing rear of screen away from operator, and using the display to view image capture) for when the camera is being utilized for general camera image capture use by the operator, e.g. vacations or to transmit a scene which the video-conference user is currently observing, and the second pattern for when the camera is being used for videoconferencing (center-weight – facing front toward the immediate operator, and using display to show person with whom video-conferencing.)

Furthermore, Wakabayashi is found to teach a camera mounted to a display device by way of camera support means (figs. 1 and 6), and including photographing direction detecting means (fig. 8 indicators 78, 79, and 60) adjacent to the camera support means located (fig. 6) in which a photographing direction is indicated based on a predetermined angle of about 60 degrees or more upward in a perpendicular direction from the upper surface of the main body of the apparatus (fig 8, ¶0023.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to switch photographing directions and employ photographing direction means as taught by Wakabayashi with the device for controlling an exposure of an electronic camera as

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taught by McNelley, Takahashi, and Fullam, in order to control the inversion of the image based on whether the user is photographing himself/herself while still observing the displayed image or whether the user is photographing the scene ahead of the photographer while still while still observing the displayed image (JP '492 - ¶¶0005-0007,

5 ¶¶0016, and ¶¶0023-0024.)

Regarding claim 2, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 2 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the exposure detecting means includes: an area-integration circuit (fig. 3 indicator 10) for integrating the corresponding video signals for each area
10 obtained by dividing according to the first and second patterns; and weighting-adding means (fig. 3 indicator 25) for multiplying integration results for the respective areas, which are outputted from said area-integration circuit, by weights for the areas, and adding respective products to set addition results as said first and second exposure detection information areas (col. 7 line 65 – col. 8 line 7.)

15 Regarding claim 3, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 3 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the upper area in the division by the first pattern is an upper area about 1/4 that of the photographed image (fig. 8.)

Regarding claim 5, McNelley, Takahashi, Fullam, and Wakabayashi teach all of
20 the limitations of claim 5 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the electronic camera includes a solid-state image sensing device as an image pickup device (fig. 3 indicator 3, col. 4 lines 19-22.)

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Regarding claim 6, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 6 (see the 103 rejection to claim 5 supra) including a teaching by Takahashi wherein said solid-state image sensing device includes a CCD (fig. 3 indicator 3, col. 4 lines 19-22) or a CMOS sensor.

5 Regarding claim 7, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 7 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic camera is a video camera (col. 2 lines 50-53), a teaching by Takahashi wherein the electronic camera is a video camera (col. 4 lines 14-24), and a teaching by Fullam wherein the electronic camera is a video camera (col. 10 2 lines 21-25) or a digital still camera (col. 2 lines 21-25.)

Regarding claim 8, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 8 (see the 103 rejection to claim 5 supra) including a teaching by Takahashi wherein the exposure adjusting means (col. 5 line 65 – col. 6 line 60) controls an electronic shutter of the electronic camera to adjust the exposure (col. 1 15 lines 55-63, col. 5 lines 39-47.)

Regarding claim 9, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 9 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi of a device further comprising a variable gain amplifier circuit which receives the video signal generated by the electronic camera as an input (fig. 3 indicator 5), and 20 wherein the exposure adjusting means controls a gain of said variable gain amplifier circuit to adjust the exposure (col. 5 lines 39-58.)

Regarding claim 10, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 10 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic camera (fig. 12 indicator 102) is built into the electronic apparatus (fig. 12.)

5 Regarding claim 12, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 12 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic apparatus is a portable information terminal (col. 5 lines 1-7.)

10 **Claims 11 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi, Fullam, and Wakabayashi as applied to claim 1 above, and further in view of Ma (US 5,880,783.)

15 Regarding claim 11, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 11 (see the 103 rejection to claim 1 supra) except teaching a device wherein the electronic camera is detachable from the electronic apparatus. Ma teaches an electronic camera that is detachable from the electronic apparatus (fig. 3, col. 2 lines 24-27.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the camera unit detachable as taught by Ma, when making the device as taught by McNelley, Takahashi, Fullam, and Wakabayashi.

20 One of ordinary skill in the art at the time the invention was made would be motivated to make the camera unit detachable from the electronic apparatus having a display, so that the camera unit could be interchangeably used on more than one electronic

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apparatus having a display or so that different camera units could be used on the same electronic apparatus in the event the camera breaks, requiring only replacement of the camera unit.

Regarding claim 13, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 13 (see the 103 rejection to claim 1 supra) except teaching a device wherein the electronic apparatus is a personal computer or a PDA. Ma teaches a camera used in conjunction with a personal computer (fig. 3, col. 2 lines 24-27), which can be used for video conferencing (col. 1 lines 5-26.) It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electronic apparatus to which the device as taught by McNelley, Takahashi, Fullam, and Wakabayashi is mounted, to be a personal computer as taught by Ma. One of ordinary skill in the art at the time the invention was made would be motivated to have the electronic apparatus be a personal computer so that the user could also have the functionality of a portable computer at their disposal (word processing, games, email, etc.), versus limited functionality if the electronic apparatus were merely for video conferencing and camera use.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi, Fullam, and Wakabayashi as applied to claim 1 above, and further in view of Yoshimura et al. (US 5,677,733.)

Regarding claim 4, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 4 (see the 103 rejection to claim 1 supra) including a teaching by

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Takahashi wherein the central area in the division by the second pattern has a substantially rectangular form ('462, fig. 7), the height thereof is about 1/2 that of the photographed image ('462, fig. 7.) However neither Takahashi, Fullam, nor Wakabayashi, teach a pattern having the width thereof being about 1/3 that of the

5 photographed image. Regardless, Yoshimura teaches a pattern that has a substantially rectangular form (fig. 6 indicator 101), the height thereof is about 1/2 that of the photographed image (fig. 6), and the width thereof being about 1/3 that of the photographed image (fig. 6.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the center-weighted pattern as taught by
10 Yoshimura, with the device as taught by McNelley, Takahashi, Fullam, and Wakabayashi. One of ordinary skill in the art at the time the invention was made would have been motivated to use the pattern of Yoshimura in order to assign greater weight to the object in the center of the images, by way of a tighter, smaller center, than the pattern originally suggested by Takahashi.

15 Claim 2 is also rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi, Fullam, and Wakabayashi as applied to claim 1 above, and further in view of Yoshimura et al. (US 5,677,733.)

Regarding claim 2, McNelley, Takahashi, Fullam, and Wakabayashi teach all of the limitations of claim 2 (see the 103 rejection to claim 1 supra) including a teaching by

20 Takahashi wherein the exposure detecting means includes: an area-integration circuit (fig. 3 indicator 10) for integrating the corresponding video signals for each area obtained by dividing according to the first and second patterns; and weighting-adding

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means (fig. 3 indicator 25) for multiplying integration results for the respective areas, which are outputted from said area-integration circuit, by weights for the areas, and adding respective products to set addition results as said first and second exposure detection information areas (col. 7 line 65 – col. 8 line 7.) It is further observed that

- 5 Yoshimura also teaches a device wherein the exposure detecting means includes: an area-integration circuit (fig. 3 indicators 17 and 18) for integrating the corresponding video signals (col. 7 lines 38-42) for each area obtained by dividing according to a pattern (fig. 4a); and weighting-adding means (fig. 3 indicators 19, 20, R1, R2 and R3) for multiplying integration results for the respective areas, which are outputted from said
- 10 area-integration circuit, by weights for the areas, and adding respective products to set addition results as exposure detection information (col. 7 line 28 – col. 8 line 32.) It would have been obvious to one of ordinary skill in the art at the time the invention was made for the exposure detecting means to include similar circuitry and inner workings as taught by Yoshimura, with the device as taught by McNelley, Takahashi, Fullam, and
- 15 Wakabayashi. One of ordinary skill in the art at the time the invention was made would have been motivated to make this particular combination as another way to effect weighted light measuring, and thereby perform automatic exposure control in a camera.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kishida et al. (US 6,933,981) discloses switching camera directions when a
5 camera exceeds about 60 degrees.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
10 MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
15 the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the
20 examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

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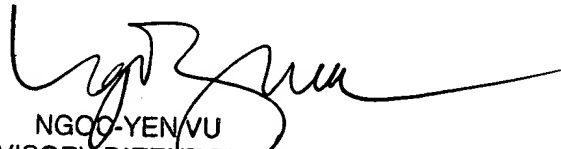
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen T. Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

- 5 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic
- 10 Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gary C. Vieaux
Examiner
Art Unit 2622

15 Gcv2


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER